The US' original oil endowment has been estimated at 260 billion barrels, ranking third in the world.

> Walter Youngquist, PhD., 1997, Chair Emeritus Department of Geology, University of Oregon

# Our Largest Oil Fields

Production and Reserves

he largest oil fields in the United States - based on cumulative oil that has already been produced,

PLUS estimated reserves that are yet to be produced - are in Alaska, Texas and California:

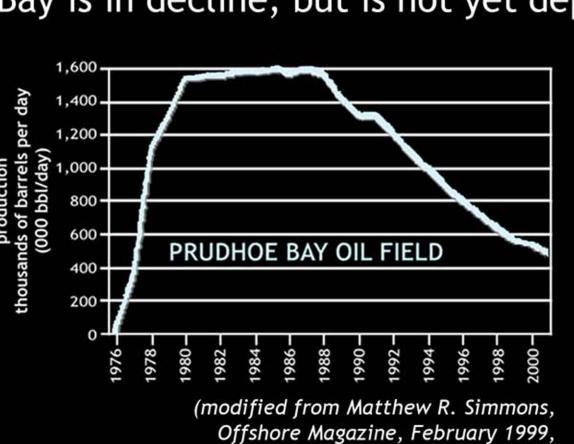
Prudhoe Bay Prudhoe Bay oil field was discovered in 1968 and production began in 1977. Nearly 13 billion barrels of oil

had been produced from

Prudhoe Bay by 2003. Production peaked in 1988 at almost 1,600,000

barrels of oil per day. By 2001, production was under 500,000 barrels of oil per day. Prudhoe Bay is in decline, but is not yet depleted.

www.simmonsco-intl.com)



Prudhoe Bay, Alaska East Texas, Texas Wilmington, California Midway-Sunset, California Kern River, California Yates, Texas

Wasson, Texas Elk Hills, California

1.95 billion barrels 1.8 billion barrels

Kuparuk River, Alaska 1.5 billion barrels

(Gibson Consulting, 2005, www.gravmag.com)

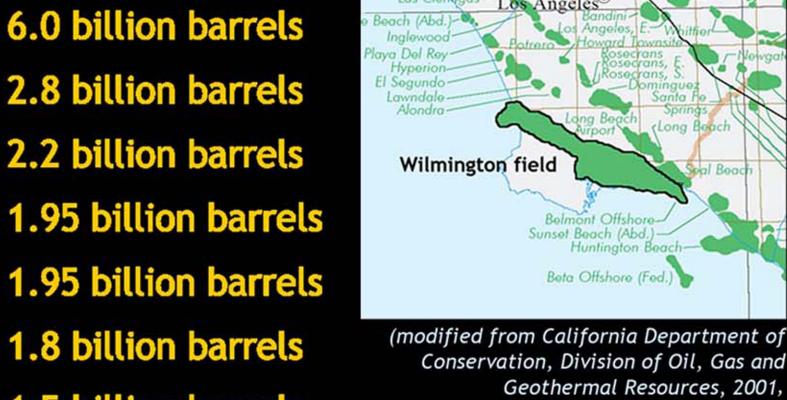
10+ billion barrels

6.0 billion barrels

2.8 billion barrels

2.2 billion barrels

1.5 billion barrels



Conservation, Division of Oil, Gas and Geothermal Resources, 2001, www.consrv.ca.gov)



(modified from Texas Railroad Commission,

Oil and Gas Division, 1999,

# modified from California Department of Division of Oil, Gas and Geothermal Resources, 2001

# Producing

The United States has more than 500,000 oil wells which produced over 5.7 million barrels per day of crude oil in 2003. Leading oil-producing states are Texas, Alaska, California and Louisiana.

Discoveries of large oil fields in deepwater regions of the Gulf of Mexico have made the Gulf the top oil producing region

Percentage of 2003 US Crude Oil Production by State/Region

offshore Gulf of 24% Mexico

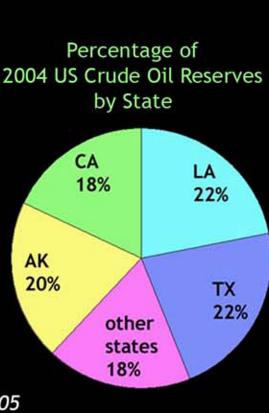
in the US. Offshore fields produced 1.6 million barrels per day in 2003.

> (Energy Information Administration, DOE, 2004, www.eia.doe.gov)

Proved Oil Reserves

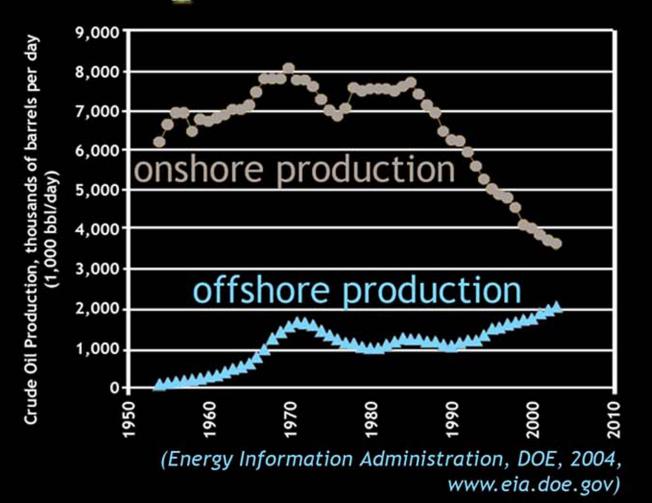
As of January 1, 2005, the US had about 21.9 billion barrels of proved oil reserves, making it 11th-ranked in oil reserves in the world. Eighty percent of the US' oil reserves are concentrated in Texas, Louisiana, California and Alaska.

(Energy Information Administration, DOE, 2005) www.eia.doe.gov)



#### New Horizons Offshore Gulf of Mexico Deepwater Fields

Over the past 50 fifty years, US' crude oil production from onshore fields has declined, while production from offshore fields has grown. This is in part due to advances in technology which have enabled exploration and development of submarine oil reservoirs which were previously unaccessible.



Oil and Gas Division, 1999,

www.rrc.state.tx.us)

Many large oil fields have been discovered in the deepwater region of the Gulf of Mexico. As of 2005, the Thunder Horse complex is the largest. Thunder Horse lies below 6,050 feet of Gulf ocean and 25,000 feet of mud, rock and salt deposits. Estimated reserves for the Thunder Horse complex, which includes the Thunder Horse North oil field, are one billion barrels of oil equivalent. (BP Global, March 2005, www.bp.com)

Mad Dog, a Gulf of Mexico oil field which went on production in January 2005, has reserves which were initially estimated at 200 - 450 million barrels of oil equivalent.

(news.rigzone.com, February 2005)

However, in March 2005, an appraisal well drilled on the flank



of the Mad Dog field encountered oil, increasing the previously known limits and reserves of the reservoir.

(news.rigzone.com, rebruary 2005)

# Strategic Petroleum Reserve

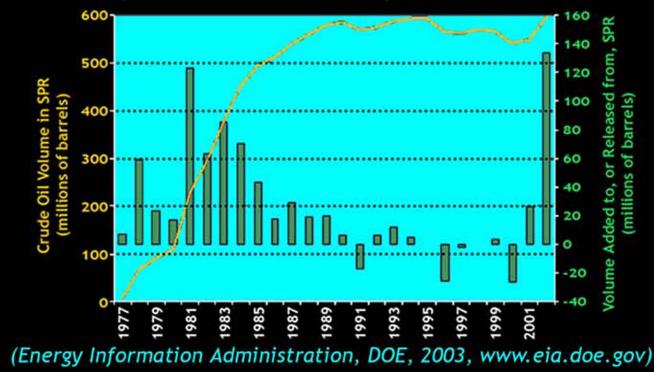
#### Flexibility and Security

The Strategic Petroleum Reserve (SPR) was established in December 1975 after oil imports were stopped by the 1973-1974 oil embargo. The SPR was created to maximize protection against oil supply disruptions and provide a national defense fuel reserve. As of June 2005, the SPR's inventory was 694 million barrels of oil; the SPR has a capacity of 727 million barrels of oil.

#### **SPR Storage Sites**



Since its inception, crude oil has been withdrawn from SPR several times. In 1991, SPR oil was used in conjunction with Operation Desert Storm.



Three times during 1996, non-emergency sales of oil from the SPR were authorized by Congress to raise revenues.

When Hurricane Lili disrupted commercial oil shipments in 2002, an exchange from SPR was carried out so that a major oil pipeline operator could continue critical crude oil shipments. (Office of Fossil Energy, DOE, 2005, www.fe.doe.gov)

### Naval Petroleum Reserves "Open-Up" Legislation

On April 5, 1976, in response to the oil shortages created by the Arab oil embargo of 1973-74, President Ford signed into law the Naval

Petroleum Reserves Production Act. Referred to as the "Open Up" legislation, this law enabled the Naval Petroleum Reserves (NPR) to operate in a production mode rather than a conservation mode.

(Office of Fossil Energy, DOE, 2005, www.fe.doe.gov)





